Let "y = the initial velocity of the fluid in motion;
A_m=the specific weight of the fluid in motion;
Ai = ihe specific weight of the fluid at rest.

The weight of each unit of volume of the fluid in motion is less than A*. The upward force which acts upon each unit volume of the fluid in motion is, therefore, equal to A* — A_w. The upward acceleration due to this force is

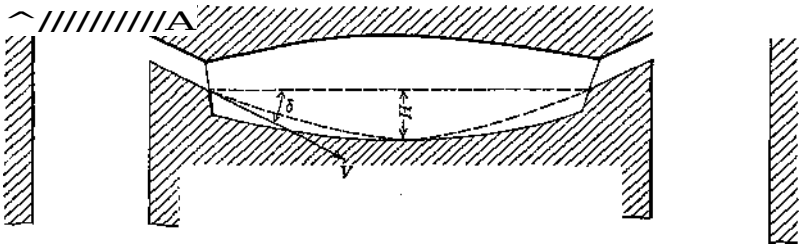

FIG. 43.

2 The depth to which the jet will descend for this case is

$$\sim \quad {}_{ry} \quad v^2 \sin^2 5 \quad A_m$$

A°

For hot gases

$$A_m =$$

from

$$H=- \quad \frac{A_o}{2g} \quad \frac{sn^{2}}{\frac{A_o}{A_c}} \quad \frac{l+at,}{2g}$$

$$1+att$$

$$l+at_m$$

$$R_v^2 \sin^2 B \quad a^{+ti} = v^2 \sin^2 d \qquad (F)$$

$$273+t,$$

$$2g \quad t_m\text{-}ti$$

$$2g \quad X \; t_m\text{-}t_f$$

For vertical jets, when 5 = 90°, this formula becomes

$$H \frown X \sim l \frown k$$